

**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (currently amended) A GaN-based semiconductor light emitting diode, comprising:

a substrate on which a GaN-based semiconductor material is grown;

a lower clad layer formed on the substrate, and made of a ~~first conductive~~ GaN semiconductor material doped with an n-type dopant;

an active layer formed on a designated portion of the lower clad layer, and made of an undoped GaN semiconductor material;

an upper clad layer formed on the active layer, and made of a ~~second conductive~~ GaN semiconductor material doped with a p-type dopant;

an alloy layer which is formed on the upper clad layer to directly contact a surface of the upper clad layer, and made of ZnNi consists essentially of Zn and Ni, and absorbs hydrogen existing on the surface of said upper clad layer to prevent the p-type dopant from combining with said hydrogen; and

an TCO (Transparent Conduct Oxide) layer formed on the alloy layer.

2. (original) The GaN-based semiconductor light emitting diode as set forth in claim 1, wherein the alloy layer has a thickness of 100Å or less.

3-4. (canceled)

5. (original) The GaN-based semiconductor light emitting diode as set forth in

claim 1, wherein the TCO (Transparent Conduct Oxide) layer is made of at least one material selected from the group consisting of ITO, ZnO, Indium Oxide and MgO.

6-14. (canceled)

15. (new) A GaN-based semiconductor light emitting diode, comprising:

- a substrate on which a GaN-based semiconductor material is grown;
- a lower clad layer formed on the substrate, and made of a GaN semiconductor material doped with an n-type dopant;
- an active layer formed on a designated portion of the lower clad layer, and made of an undoped GaN semiconductor material;
- an upper clad layer formed on the active layer, and made of a GaN semiconductor material doped with a p-type dopant;
- a ZnNi alloy layer which is formed on the upper clad layer, directly contacts a surface of the upper clad layer, and absorbs hydrogen existing on the surface of said upper clad layer to prevent the p-type dopant from combining with said hydrogen; and
- an TCO (Transparent Conduct Oxide) layer formed on the alloy layer.

16. (new) The GaN-based semiconductor light emitting diode as set forth in claim 15, wherein the alloy layer has a thickness of 100Å or less.

17. (new) The GaN-based semiconductor light emitting diode as set forth in claim 15, wherein the TCO (Transparent Conduct Oxide) layer is made of at least one material selected from the group consisting of ITO, ZnO, Indium Oxide and MgO.